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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/587,302	06/05/2000	Hoa Thu Tran	NCRC-0011-US(9172)	7601
26890	7590	06/09/2004	EXAMINER	
JAMES M. STOVER NCR CORPORATION 1700 SOUTH PATTERSON BLVD, WHQ4 DAYTON, OH 45479			ANYA, CHARLES E	
			ART UNIT	PAPER NUMBER
			2126	

DATE MAILED: 06/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/587,302	<b>Applicant(s)</b> TRAN ET AL.	
	<b>Examiner</b> Charles E Anya	<b>Art Unit</b> 2126	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 April 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3,5,7,9-11,13-16,19-21 and 23-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,5,7,9-11,13-16,19-21 and 23-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. Claims 1-3,5,7,9-11,13-16,19-21 and 23-35 are pending in this application.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. **Claims 21,31,33 and 34 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Pat. No. 6,697,835 B1 to Hanson et al.**

4. As to claim 21, Hanson teaches an article comprising one or more machine-readable storage media containing instructions that when executed cause a database system having plural nodes (figures 6/7 Col. 8 Ln. 5 – 45) to: receive a command to start database software components in the plural nodes (“...Jobstart...” Col. 8 Ln. 5 – 8), launch a start routine in a first one of the nodes in response to the command (Col. 8 Ln. 5 – 12), issue requests, from the start routine, to respective nodes/in response to the requests, invoke services in respective nodes to start database software components (figures 6/7 Col. 8 Ln. 10 – 45).

5. As to claim 31, Hanson teaches the article of claim 21, wherein starting the database software components comprise starting a query coordinator to process database queries and a data server to control access of data in storage in each node ("...messenger..." Col. 8 Ln. 5 – 45).

6. As to claim 33, Hanson teaches a database system comprising: a plurality of nodes (figures 6/7 Col. 8 Ln. 5 – 45), database software components executable in corresponding nodes ("...messengers and agents..." Col. 8 Ln 10 – 15), a start procedure executable in a first one of the nodes to invoke services in respective nodes ("...Start Service..." Col. 8 Ln. 5 – 15) and wherein the services are executable to start the database software components (Col. 8 Ln. 5 – 15).

7. As to claim 34, Hanson teaches the database system of claim 33, further comprising a storage, wherein the database software components comprise a query coordinator in each node to process database queries, and a data server in each node to control access of the storage ("...messenger..." Col. 8 Ln. 5 – 45).

### ***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**9. Claims 1-3,5,7,9-11,13-16,19,23-25,27-30,32 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 6,697,835 B1 to Hanson et al. in view of U.S. Pat. No. 5,802,367 to Held et al.**

10. As to claim 1, Hanson teaches a method of controlling software components in a processing system having plural nodes (figures 6/7 Col. 8 Ln. 1 – 45), comprising: receiving a request to start the processing system (“...jobstart.../...user request...” Col. 8 Ln. 1 – 45), launching a start routine in a first one of the nodes in response to the request/the start routine causing a service to be invoked in each of the nodes (Col. 8 Ln. 5 – 8) and the services starting the selected software components in respective nodes of the processing system (Col. 8 Ln. 12 – 13).

11. Although Hanson teaches activating multiple processes in the same node (Col. 8 Ln. 12 – 13), Hanson is not explicit with reference to determining one or more selected software components to start in each node.

12. Held teaches to determining one or more selected software components to start in each node (figure 3 Col. 6 Ln. 53 – 61, figure 6 Col. 10 Ln. 51 – 54).

13. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Held and Hanson because the teaching of Held would improve the system of Hanson by determining the availability of a server code (Col. 6 Ln. 56 – 59).

14. As to claim 2, Hanson teaches the method of claim 1, wherein causing the services to be invoked comprises causing WINDOWS® services to be invoked (Col. 8 Ln. 6 – 8).

15. As to claim 3, Held teaches the method of claim 2, further comprising invoking the services with a WINDOWS® service control manager module (Col. 6 Ln. 40 – 44).

16. As to claim 5, the method of claim 1, wherein starting the selected software components comprises starting software components defined as WINDOWS® services (Col. 8 Ln. 6 – 8).

17. As to claim 7, Held teaches the method of claim 1, further comprising running an instance of a manager module in each node, the instance of the manager module in each node responsive to the start routine to invoke the services (figure 6 Col. 10 Ln. 34 – 62).

18. As to claim 9, Hanson teaches the method of claim 1, wherein the first one of the nodes is a master node, wherein launching the start routine is performed in the master node (Col. 8 Ln. 1 – 12).

19. As to claim 10, Held teaches the method of claim 7, further comprising the start routine communicating requests to the manager module instances in the nodes to start corresponding services (figure 6 Col. 10 Ln. 34 – 62).

20. As to claim 11, Held teaches the method of claim 1, wherein causing the services to be invoked comprises causing one service to be invoked for each software component (Col. 10 Ln. 51 – 54).

21. As to claim 13, a database system comprising: a plurality of nodes (figures 6/7 Col. 8 Ln. 1 – 45), software components executable in corresponding nodes (“...messenger and agent...” Col. 8 Ln. 8 – 15), the software components comprising a query coordinator in each node to process database queries (“...messenger...” Col. 8 Ln. 38 – 45) and a start procedure executable in a first one of the nodes to invoke the services in respective nodes (“...Start Service...” Col. 8 Ln. 1 – 15).

22. Hanson is silent with reference to a manager module executable in the database system to invoke services to control starting of the software components.

23. Held teaches a manager module executable in the database system to invoke services to control starting of the software components (figure 3 Col. 6 Ln. 53 – 61, figure 6 Col. 10 Ln. 51 – 54).

24. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Held and Hanson because the



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teaching of Held would improve the system of Hanson by determining the availability of a server code (Col. 6 Ln. 56 – 59).

25. As to claim 14, Held teaches the database system of claim 13, wherein the manager module comprises plural instances executable on corresponding nodes (figure 6 Col. 10 Ln. 34 – 62).

26. As to claim 15, Held teaches the database system of claim 13, wherein the manager module comprises a WINDOWS® service control manager (figure 3 Col. 6 Ln. 53 – 61, figure 6 Col. 10 Ln. 51 – 54).

27. As to claim 16, Hanson teaches the database system of claim 13, wherein the services comprise WINDOWS® services (Col. 8 Ln. 6 – 8).

28. As to claim 19, Hanson teaches the database system of claim 13, wherein the start procedure comprises a start service and a program invokable by the start service (Col. 8 Ln. 6 – 8).

29. As to claim 23, Hanson teaches the method of claim 1, wherein the processing system comprises a parallel database system (Col. 6 Ln. 27 – 31), and wherein starting the selected software components comprises starting database software components (Col. 8 Ln. 1 – 15).

30. As to claim 24, Hanson teaches the method of claim 23, wherein starting the database software components comprises starting a query coordinator in each node to process database queries (figures 6/7 "...messenger..." Col. 8 Ln. 38 – 45).

31. As to claim 25, Hanson teaches the method of claim 24, wherein starting the database software components comprises starting a data server in each node to control access of data in storage (Col. 8 Ln. 5 – 45).

32. As to claim 27, Although Hanson and Held as modified does not explicitly teach the method of claim 1, further comprising each service monitoring for termination of a corresponding software component, it is obvious that at the end of process/thread execution it is terminated, thus inherent in the process execution of Hanson.

33. As to claim 28, Hanson teaches the database system of claim 13, further comprising a storage, wherein the software components further comprise a data server in each node to control access to data in the storage (figure 6/7 Col. 8 Ln. 5 – 45).

34. As to claims 29 and 32, see the rejection of claim 27.

35. As to claim 30, Hanson teaches the database system of claim 13, wherein the start procedure is adapted to be invoked in response to a request to start a database application (Col. 8 Ln. 5 –15).

36. As to claim 35, Held teaches the database system of claim 34, wherein one service is invoked in each node for each database software component in the node (Col. 10 Ln. 51 – 54).

**37. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 6,697,835 B1 to Hanson et al. in view of U.S. Pat. No. 5,802,367 to Held et al. as applied to claim 1 above, and further in view of U.S. Pat. No. 5,748,896 to Daly et al.**

38. As to claim 26, Hanson and Held as modified is silent with reference to the method of claim 1, further comprising each service monitoring a status of a corresponding software component.

39. Daly teaches the method of claim 1, further comprising each service monitoring a status of a corresponding software component (figure 5A Col. 7 Ln. 1 – 16).

40. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Daly and Hanson because the teaching of Daly would improve the system of Hanson by providing means for managing the running statuses of service entities (Col. 7 Ln. 8 – 16).

41. **Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 6,697,835 B1 to Hanson et al. in view of U.S. Pat. No. 5,748,896 to Daly et al.**

42. As to claim 20, Hanson teaches a database system comprising: a plurality of nodes (figure 6/7 Col. 8 Ln. 1 – 45), database software components executable in corresponding nodes (“...messenger and agent...” Col. 8 Ln. 8 – 15).

43. Hanson is silent with reference to a manager module executable to control the database software components in the plural nodes and to enable a monitoring module to monitor statuses of the database software components in the nodes.

44. Daly teaches a manager module executable to control the database software components in the plural nodes and to enable a monitoring module to monitor statuses of the database software components in the nodes (figure 5A Col. 7 Ln. 1 – 16).

45. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Daly and Hanson because the teaching of Daly would improve the system of Hanson by providing means for managing the running statuses of service entities (Col. 7 Ln. 8 – 16).

### ***Response to Arguments***

46. Applicant's arguments with respect to claims 1-3,5,7,9-11,13-16,19-21 and 23-35 have been considered but are moot in view of the new ground(s) of rejection.

**Conclusion**

47. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Pat. No. 6,633,898 B1 to Seguchi et al.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles E Anya whose telephone number is (703) 305-3411. The examiner can normally be reached on M-F (8:30-6:00) First Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, An Meng-Ai can be reached on (703) 305-9678. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Charles E Anya  
Examiner  
Art Unit 2126

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